

A recent perusal of the records housed in Maidstone Museums and Art Galleries revealed several other records. On 19 June 1896 the Rev. E.E. Green took it at Bearsted (TQ 75). During the first few years of the twentieth century J.W. Yerbury encountered it at Dartford (TQ 57). Specimens exist with the dates 8 June 1909, 13 June 1909 and 14 June 1912. In July 1932 H. St. K. Donisthorpe recorded it from Port Victoria on the Isle of Grain (TQ 87). In the 1940s G. Waller and H.W. Andrews took specimens at Ashford (TR 04) and Eltham (TQ 47) respectively; Waller's being on 30 June 1941 and 1 June 1942 whilst Andrews' were on 6 and 11 June 1946. Finally on 4 June 1956 J.C. Felton recorded it from Sittingbourne (TQ 96).

Donisthorpe's record is particularly interesting since it is from the Grain area where the fly has recently been found in abundance. Unfortunately nothing can be ascertained of the habitats for the historical records. All that I can say from personal experience is that *Dorycera graminum* has recently been found in dry, coastal grassland in north Kent.— LAURENCE CLEMONS, 14 St John's Avenue, Sittingbourne, Kent ME10 4NE.

EDITORIAL COMMENT: It may be of interest that I can add another recent Kent example of *Dorycera graminum*, from Northfleet, grid reference TQ 6173, one female on 5 July 1995, taken by myself as well as three Essex specimens, just across the River Thames to the North at Dolphin Quarry, Purfleet, TQ 5678, one female on 7 May 1996 taken by myself and at West Tilbury, TQ 6777, a pair taken by Roger Payne on 31 May 1996. The latter three are the only known Essex records (Del Smith *Pers. comm.*).— COLIN W. PLANT.

Melanism in some Ennominae (Lep.: Geometridae) in N.E. Scotland

The so-called industrial melanics of many species of Ennominae were familiar to me during an upbringing in the Manchester area in the 1950s and 1960s. But to encounter some of these forms in thoroughly rural, lichen-encrusted north-east Scotland was completely unexpected.

In Banffshire, the Scalloped Hazel *Odontopera bidentata* Cl. is often variegated with blackish-brown, as described and illustrated by Skinner (1984). In a few specimens the dark suffusion is quite heavy, but these could not really be confused with the truly melanic ab. *nigra* Prout. Two males which were identical to the latter form, having forewings, hindwings and abdomen blackish brown, but a pale (almost buff) head and thorax, were caught in my garden on 3.vi.93 and 28.v.97.

The Pale Brindled Beauty *Apocheima pilosaria* D.&S. is reasonably common here. Most of the males are paler than those seen in the south of England, often with a greyish-white ground colour sharply marked with dark grey. Surprisingly, a melanic male agreeing in all respects with f. *monacharia* Staud. was attracted to an outside light on the wall of my house on 17.ii.93.

The Dotted Border *Agriopsis marginaria* Fabr. is also common, inhabiting open moorland as well as woodland. At Ordiquhill, the males are variable, some being almost as dark as ab. *fusca* Mosley, which was easily the dominant form in the Manchester area during my time there. However, the gene responsible here may be

different, as the light and dark forms merge into each other, instead of separating neatly into typical, intermediate and melanic specimens as did the Manchester populations.

I have been unable to find out anything about the prevalence if these melanic forms elsewhere in Scotland. If any reader could help, I would be most grateful.—ROY LEVERTON, Whitewells, Ordiquhill, Cornhill, Banffshire AB45 2HS.

Egg-laying bias in *Pieris brassicae* (L.) and *Pieris rapae* (L.) (Pieridae) on garden nasturtium

During two days in 1988 and 1989, counts of eggs were made of the large and "small" white butterflies on garden nasturtium in a circular rockery (diameter: 2.2 metres), the centre of which was dominated by a *buddleia* bush. Although *Pieris napi* was seen laying on *Aubrieta* and small crucifers such as *Cardamine hirsuta* L., only *P. rapae* was observed laying on *Tropaeolum major*.

By 1 August 1988, 27 egg batches of *P. brassicae* and 87 eggs of *P. rapae/napi* had been laid on a total of 893 leaves of *Tropaeolum*. Egg-laying in both species was biased for aspect (*P. brassicae*, $\chi^2(3) = 24.4$, $P < 0.001$; *P. rapae/napi*, $\chi^2(3) = 24.9$, $P < 0.001$). Plants in the rockery were divided into four quadrants about north-south and east-west axes. The distribution, clockwise from north-west was 1:2:18:6 in *P. brassicae* and 8:8:38:33 in *P. rapae/napi* for a leaf distribution of 162:226:230:275. Bias, in both species, was for the south, particularly the south-east quadrant.

In July 1989, *Tropaeolum* was distributed only over the southern half of the rockery. On 29 July 1989, 16 egg batches of *P. brassicae* and 74 eggs of *P. rapae/napi* were found on 371 leaves. No significant bias was found in aspect between east and west regarding the distribution of eggs (*P. brassicae*, $\chi^2(1) = 0.09$, $P > 0.7$; *P. rapae/napi*, $\chi^2(1) = 0.68$, $P > 0.3$).

While making observations on the distribution of eggs in relation to aspect, some other data were collected. In both 1988 and 1989, *P. brassicae* biased egg-laying to the undersurface of leaves (1988: $\chi^2(1) = 13.4$, $P < 0.001$; 1989: $\chi^2(1) = 6.3$, $P < 0.02$), whereas results for *P. rapae/napi* contrasted between the two years, the bias in 1989 being for leaf under surfaces (1988: $\chi^2(1) = 2.2$, $P > 0.1$; 1989: $\chi^2(1) = 40.5$, $P < 0.001$). During 1988, if anything, there was a tendency in *P. rapae/napi* for egg-laying to be concentrated on the upper surface of leaves. A further indication of this was found in the seven cases of joint egg-laying by both species on the same leaf. Of these, only two were on the same surface; six of seven each of *P. brassicae* and *P. rapae/napi* were found on the under surface and upper surface of leaves respectively. In 1989, comparisons were also made for shade (under *buddleia*) and leaf size. For *P. rapae/napi* there was bias for sites exposed to sunlight ($\chi^2(1) = 20.8$, $P < 0.001$), but no bias for *P. brassicae* ($\chi^2(1) = 2.4$, $P > 0.1$). Plants were divided into three categories with small, medium and large leaves. No bias was found in selection for leaf size. Finally, in 1989, details were taken of egg batch size. In *P. brassicae* mean egg batch size was found to be 18.8 ($\sigma = 10.5$, $N = 16$) with a minimum of three and a maximum of 32 eggs. For *P. rapae/napi* 48 of the eggs were